

IN THE CLAIMS:

Please amend the claims as follows:

1-8. Canceled

9. (Previously presented) The cache assignment method of claim 10, the method further comprising forwarding any data requests associated with non-conflicting cachelet pointers to cachelets identified by the respective pointers.

10. (Previously presented) A cache assignment method, comprising:
receiving plural data requests, each associated with respective cachelet pointers,
determining whether any of the cachelet pointers conflict with any other cachelet pointers,
if a conflict occurs among cachelet pointers, forwarding one of the data requests associated with a conflicting cachelet pointer to the identified cachelet, and
reassigning data requests associated with remaining conflicting cachelet pointers to unused cachelets.

11. (Original) The cache assignment method of claim 10, wherein multiple data requests having a common set address are forwarded to different cachelets.

12. (Previously presented) The cache assignment method of claim 10, further comprising:
determining whether any of the cachelet pointers are valid,
forwarding data requests having valid, non-conflicting cachelet pointers to the addressed cachelet, and
assigning data requests of non-conflicting cachelet pointers to unused cachelets according to a default assignment scheme.

13. (Previously presented) The cache assignment method of claim 10, wherein copies of a single data item may be stored in multiple cachelets.

14. (Previously presented) A cache assignment method, comprising:
receiving plural data requests and associated cachelet pointers, the cachelet pointers addressing one of a plurality of cachelets within a cache,

determining whether any of the cachelet pointers conflict with any other cachelet pointers,

forwarding non-conflicting data requests to a cachelet identified by the cachelet pointer,

for the conflicting data requests, forwarding one of the conflicting data requested to the identified cachelet and

reassigning remaining conflicting data requests to unused cachelets.

15. (Previously presented) The cache assignment method of claim 14 wherein the data requests are associated with respective cachelet pointers, the method further comprising:

determining whether any of the cachelet pointers are valid, and

assigning remaining data requests to unused cachelets according to a default assignment scheme.

16. (Previously presented) A cache assignment method, comprising:

receiving plural data requests and associated cachelet pointers, the cachelet pointers addressing one of a plurality of cachelets within a cache,

determining whether any of the cachelet pointers are valid,

forwarding data requests having valid cachelet pointers to the addressed cachelet, and

assigning remaining data requests to unused cachelets according to a default assignment scheme.

17. (Original) The cache assignment method of claim 16, further comprising:

determining whether any of the cachelet pointers conflict with any other cachelet pointers,

forwarding any data requests associated with non-conflicting cachelet pointers to cachelets identified by the respective pointers.

18. (Original) The cache assignment method of claim 16, further comprising:

if a conflict occurs among cachelet pointers, forwarding one of the data requests associated with a conflicting cachelet pointer to the identified cachelet, and

reassigning data requests associated with remaining conflicting cachelet pointers to unused cachelets.

19. Canceled.

20. (Currently amended) ~~cache system~~A cache system, comprising:
a cache provided as a first layer of the cache system, comprising:
a plurality of independently addressable cachelets,
means for distributing independent loads to each of the cachelets in a single clock cycle; and
a second layer of cache to receive a load that misses the cachelet to which it was assigned.
21. (Original) The cache system of claim 20, wherein the second layer of cache is a system memory.
22. (Previously presented) A cache system comprising:
a first layer of cache, comprising a plurality of independently addressable cachelets and means for distributing multiple loads among the cachelets in a single clock cycle, and
a second layer of cache to receive a load that misses the cachelet to which it was assigned.
23. (Previously presented) The cache system of claim 22, wherein the second layer of cache is a system memory.
- 24-25. Canceled.
26. (Previously presented) A cache assignment method, comprising:
receiving plural data requests, wherein the data requests are associated with respective cachelet pointers,
determining whether any of the cachelet pointers are valid,
forwarding data requests having valid cachelet pointers to the addressed cachelet, and
assigning remaining data requests to unused cachelets according to a default assignment scheme.
27. (Previously presented) The cache assignment method of claim 26, wherein each data request includes a cachelet pointer, the method further comprising forwarding any data requests associated with non-conflicting cachelet pointers to cachelets identified by the respective pointers.

28. (Previously presented) The cache assignment method of claim 26, the method further comprising:

receiving plural data requests, each associated with respective cachelet pointers,
determining whether any of the cachelet pointers conflict with any other cachelet pointers,

if a conflict occurs among cachelet pointers, forwarding one of the data requests associated with a conflicting cachelet pointer to the identified cachelet, and

reassigning data requests associated with remaining conflicting cachelet pointers to unused cachelets.

29. Canceled.

30. (Previously presented) The cache assignment method of claim 10, further comprising forwarding the reassigned data requests in parallel with the other forwarded data requests.

31. (Previously presented) The cache assignment method of claim 14, further comprising forwarding the reassigned data requests in parallel with the non-conflicting data requests and the one conflicting data request.

32. (Previously presented) The cache assignment method of claim 14, further comprising forwarding the assigned data requests to the unused cachelets in parallel with the other forwarded data requests.

33. (Previously presented) The cache assignment method of claim 26 further comprising forwarding the assigned data requests in parallel with the forwarding of data requests having valid cachelet pointers.

34-36. Canceled.

Please add the following new claims.

37. (New) The cache system of claim 20, further comprising
a request manager

to distribute the load requests among the plurality of cachelets, and

if a conflict occurs in distributing the load requests, to assign one of the load requests associated with the conflict to unused cachelet,

wherein the means distributes reassigned loads and non-reassigned loads to the cachelets in parallel.

38. (New) The cache system of claim 22, wherein the first layer of cache further comprises a request manager:
- to distribute the load requests among the plurality of cachelets, and
 - if a conflict occurs in distributing the load requests, to assign one of the load requests associated with the conflict to unused cachelet, and
- wherein the means distributes reassigned loads and non-reassigned loads to the cachelets in parallel.